

Implementation of the Renewable Energy and Energy Efficiency Portfolio Standard (REPS)

Presentation to the
Joint Legislative Commission on Energy Policy

January 7, 2014

Dan Conrad, Staff Attorney
North Carolina Utilities Commission

Who We Are



NORTH CAROLINA UTILITIES COMMISSION

Dobbs Building, 430 North Salisbury Street 27603-5918
4325 Mail Service Center 27699-4325
Phone: (919) 733-4249 Fax: (919) 733-7300
www.ncuc.net

Commissioners

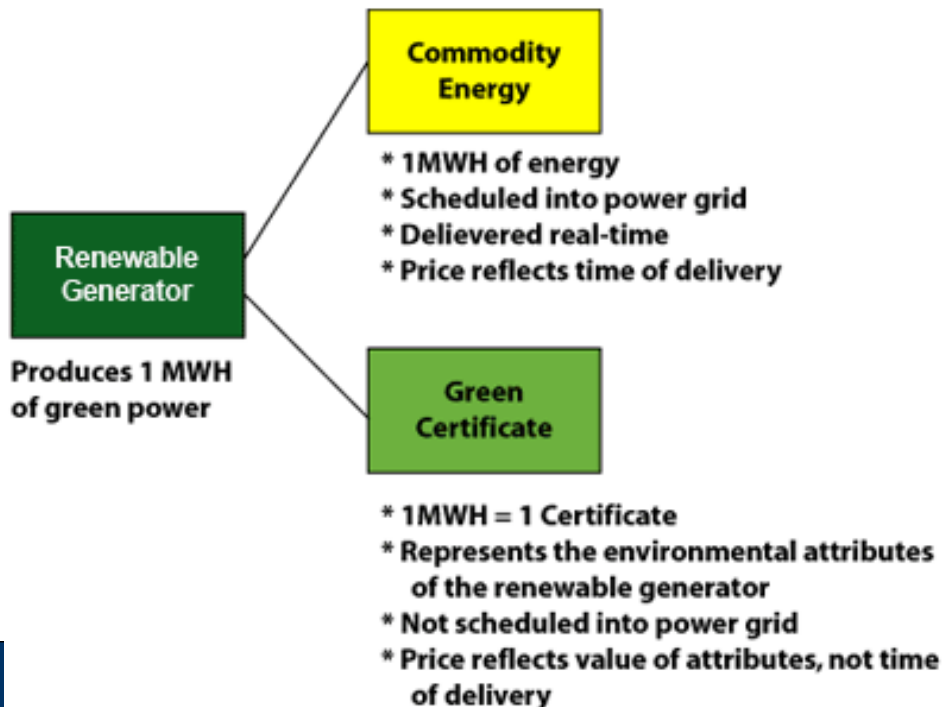
Edward S. Finley, Jr., Chairman

**Bryan E. Beatty
Susan W. Rabon
ToNola D. Brown-Bland**

**Don M. Bailey
Jerry C. Dockham
James G. Patterson**

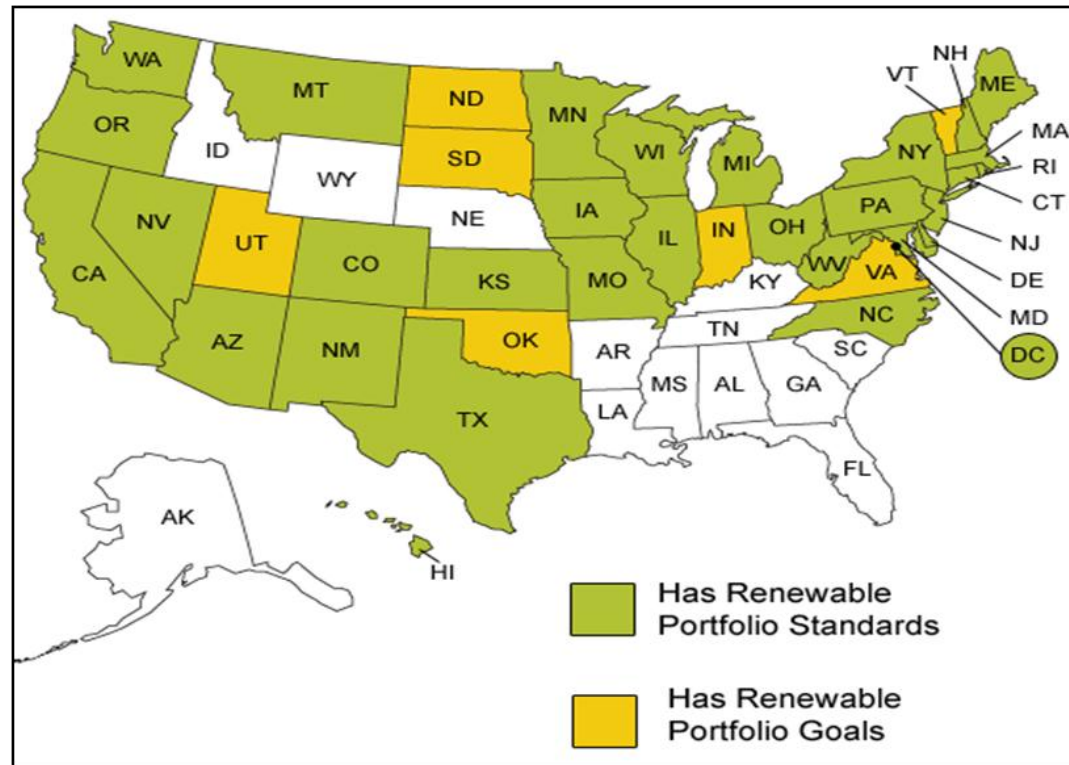
Overview: Renewable Energy Concepts

- A “renewable portfolio standard” is a policy tool that requires retail sellers of electricity to obtain a portion of their electricity portfolio from renewable resources.
- A “renewable energy certificate” (REC) is a tradable instrument equal to one unit of energy derived from a renewable energy resource.



Overview: Renewable Energy and Energy Efficiency Portfolio Standard (REPS)

- In 2007, North Carolina became the first State in the Southeast to adopt a renewable portfolio standard – part of Session Law 2007-397 (Senate Bill 3)



Overview: North Carolina's Renewable Energy & Energy Efficiency Portfolio Standard

- In 2007, North Carolina became the first State in Southeast to adopt a renewable energy portfolio standard – Session Law 2007-397 (Senate Bill 3)
 - May be met through combination of renewable energy generation and energy efficiency

Calendar Year	General Requirement	Solar	Swine Waste*	Poultry Waste*
2010	-----	0.02%		
2012	3% of 2011 NC retail sales	0.07%	0.07%	170,000 megawatt hours
2015	6% of 2014 NC retail sales	0.14%	0.14%	700,000 megawatt hours
2018	10% of 2017 NC retail sales	0.20%	0.20%	900,000 megawatt hours
2021 and thereafter	12.5% of 2020 NC retail sales <i>(2021 increased requirement only applies to IOUs)</i>			

*Portions of the Swine and Poultry waste set-asides have been delayed or cancelled by Commission Order in Docket No. E-100, Sub 113.

Current REPS Riders per month:	Residential (cap \$1.00)	Commercial (cap \$12.50)	Industrial (cap \$83.33)
Duke Energy Carolinas	\$-0.04 credit	\$3.14	\$10.73
Duke Energy Progress	\$0.19	\$7.83	\$29.62
Dominion North Carolina Power**	--	--	--

**Dominion filed for its first REPS Rider in Docket No. E-22, Sub 503, a hearing was held on November 13, 2013, the matter is still pending before the Commission.



Overview: Utilities Commission REPS Implementation

- Implementation has required numerous interpretations and rulings by the Commission.
 - For example something as simple as the year used to determine an electric power supplier's REPS obligation. Docket No. E-100, Sub 113.
- Commission implementation has ranged over numerous topics but a few central questions appear frequently, these include:
 - What constitutes a “renewable energy resource”?
 - What is a “new renewable energy facility”?
 - Implementation of the Set-Asides -
 - Solar
 - Swine Waste
 - Poultry Waste
 - How do energy power suppliers comply and demonstrate compliance?
 - How are costs recovered?
- Overview of CPCNS
 - Required for any generating facility > 2MW
- Other:
 - Net-Metering Changes as a result of Senate Bill 3 and Third Party Sales issues.

Renewable Energy Resource: Definition

REPS defines Renewable Energy Resource as:

- a solar electric, solar thermal, wind, hydropower, geothermal, or ocean current or wave energy resource;
- a biomass resource (reviewed on a case-by-case basis);
- waste heat derived from a renewable energy resource and used to produce electricity or useful, measurable thermal energy at a retail electric customer's facility; or
- hydrogen derived from a renewable energy resource

Excludes peat, a fossil fuel, or nuclear energy resource (G.S. 62-133.8(a)(8))



Renewable Energy Resource: Examples of Commission Implementation

- The portion of tire derived fuel that is derived from natural rubber, an organic material, meets the definition of biomass and thus a “renewable energy resource.”

Docket No. SP-165, Sub 3.



- Primary harvest wood products, including wood chips from whole trees are biomass resources thus a “renewable energy resource.” Docket No. E-7, Subs 939 and 940. Appealed and upheld by the Court of Appeals.

- Directed biogas is a “renewable energy resource.” For a facility to earn RECs on electricity created using directed biogas appropriate attestations must be made and records kept regarding the source and amounts of biogas injected into the pipeline and used by the facility to avoid double counting. Docket No. SP-100, Sub 29.

- The percentage of refuse derived fuel (RDF), and Syngas produced from RDF, that is determined by testing to be biomass and subject to verification of the testing procedures and results, as appropriate, is a “renewable energy resource.” Docket No. SP-100, Sub 23.



- Biosolids, the organic material remaining after treatment of domestic sewage, are a “renewable energy resource.” Docket No. SP-100, Sub 25

Renewable Energy Facility: Definition and Overview



- Defined as a facility that either:
 - Generates electric power by the use of a renewable energy resource.
 - Generates useful, measurable combined heat and power derived from a renewable energy resource.
 - Is a solar thermal energy facility.
- Excludes large-scale (>10 MW) hydro
- Electric public utilities limited to purchases from “new” renewable energy facilities
 - Placed into service on or after January 1, 2007
(with a limited number of grandfathered facilities)
- As of December 31, 2013, the Commission has:
 - Registered 876 “new” renewable energy facilities
 - Registered 24 renewable energy facilities
 - Revoked the registrations of 102 facilities for various reasons.

Renewable Energy Facility: Commission Interpretations of “New”

- Incremental utility-owned hydroelectric generating capacity of 10 MW or less that was placed into service on or after January 1, 2007, would be considered “new”. Docket No. E-100, Sub 113.
- A coal-fired plant that ceased operations in 2007 and underwent extensive modifications resulting in the ability to burn various wood waste products to generate electricity and create steam was considered “new”. Docket No. SP-161, Sub 1.
- A landfill gas facility that produced only steam but was renovated to accommodate the production of electricity was “new” “[b]ecause there was no existing capacity to generate electricity at this site and the facility is to be placed into service on or after January 1, 2007.” Docket Nos. SP-100, Sub 9 and SP-967, Sub 0.
- A CHP system, which began operations in 1969 and was always capable of producing energy from a renewable energy resource was not “new” following a retrofit because it did not add any additional capacity, but, rather, extended the useful life and increased the efficiency of an existing facility already capable of using a renewable energy resource. Docket No. SP-2285, Sub 0.



Renewable Energy Facility: Commission Interpretations of “Station Service”




Defined: Station Service is the portion of electricity or thermal energy produced by a Renewable Energy Facility that is immediately consumed at that same facility in order to power the facility's pumps, etc., or to process fuel. Such energy is not eligible for issuance of Certificates.

This policy is intended to ensure that renewable energy facilities produce more electric energy than they consume. Only the net output, that is, the output that is available to serve other needs beyond operating the facility, is eligible for the issuance of RECs.

Example: G.S. 62-133.8(a)(7)(b) requires that a CHP facility must generate “useful, measureable combined heat and power derived from a renewable energy resource” in order to be eligible for REC issuance pursuant to REPS. This is a two-part standard: the facility must produce both electric and thermal energy, and both must be useful and measurable. A facility that uses a renewable resource, but does not meet the two-part definition set out in G.S. 62-133.8(a)(7)(b) because it consumes all of the electricity that it generates is not a renewable energy facility. Docket No. SP-729, Sub 1.

Set Aside Requirements: Commission Implementation

- Commission has determined in terms of the cost-cap the set-asides have priority over the General requirement.
- The 25% limitation on the use of out-of-state RECs applies to the set-asides.
- Solar – first requirement in 2010, has been met every year. 
- Swine and Poultry first requirements in 2012, have not been met:
 - Requirements are aggregate but have been allocated on a pro-rata basis.
 - 2012 swine waste requirement eliminated and 2012 poultry waste requirement delayed by one year. Docket No. E-100, Sub 113.
 - 2013 swine and poultry waste requirements delayed by the Commission until 2014. Docket No. E-100, Sub 113.
- Cleanfields Energy Demonstration Parks – S.L. 2010-195, as amended by S.L. 2011-279:
 - Triple credit for RECs produced up to 20MW of capacity.
 - First 10MW additional RECs eligible for poultry waste set-aside
 - Second 10MW additional RECs eligible for general REPS requirement.




REPS Compliance: Compliance Reports and Plans

- Pursuant to Commission Rule R8-67(b), on or before September 1 of each year, each electric power supplier is required to file with the Commission a REPS compliance plan providing specific information regarding its plan for complying with the REPS requirement of Senate Bill 3.
 - The REPS compliance plan is a forward-looking forecast of an electric power supplier's REPS requirement and its plan for meeting that requirement.
- Pursuant to Commission Rule R8-67(c), each electric power supplier is required to annually file with the Commission a REPS compliance report.
 - The REPS compliance report is an annual look back at the RECs earned or purchased and energy savings actually realized during the prior calendar year, and the electric power supplier's compliance in meeting its REPS requirement.
- The Commission reviews and approves compliance plans and reports, upon approval RECs associated with a compliance report are permanently retired in NC-RETS.



REPS Compliance: North Carolina Renewable Energy Tracking System (NC-RETS)



- Pursuant to G.S. 62-133.8(k), enacted in 2009, the Commission was required to develop, implement, and maintain an online REC tracking system no later than July 1, 2010, in order to verify the compliance of electric power suppliers with the REPS requirements.
- APX successfully launched NC-RETS on July 1, 2010, and by letter dated September 3, 2010, the Commission accepted the system and authorized APX to begin billing users pursuant to the MOA.
- RECs have been successfully created by, and imported into, NC-RETS, and the electric power suppliers have used the system to demonstrate compliance with the 2010-2012 REPS solar set-aside requirements and the 2012 REPS general requirements.
- The Commission has established an on-going NC-RETS stakeholder group, providing a forum for resolution of issues and discussion of system improvements. The MOA with APX was recently extended for another four years.

REPS Cost Recovery: Cost Recovery Rider



- North Carolina General Statute 62-133.8(h) authorizes each electric power supplier to establish an annual rider up to an annual cap to recover the incremental costs incurred to comply with the REPS requirement and to fund certain research.
 - As the REPS requirement increases so does the per-account cost cap:

Customer Class:	2008-2011	2012-2014	2015 and thereafter
Residential	\$0.83/month	\$1.00/month	\$2.83/month
Commercial	\$4.17/month	\$12.50/month	\$12.50/month
Industrial	\$41.67/month	\$83.33/month	\$83.33/month

- Commission Rule R8-67(e) establishes a procedure under which the Commission will consider approval of a REPS rider for each electric public utility. The REPS rider operates in a manner similar to that employed in connection with the fuel charge adjustment rider authorized in G.S. 62-133.2 and is subject to an annual true-up.

Current REPS Riders per month:	Residential (cap \$1.00)	Commercial (cap \$12.50)	Industrial (cap \$83.33)
Duke Energy Carolinas	\$-0.04 credit	\$3.14	\$10.73
Duke Energy Progress	\$0.19	\$7.83	\$29.62

Other: Certificates of Public Convenience and Necessity

- Facilities greater than 2MW must obtain a Certificate of Public Convenience and Necessity (CPCN) from the Commission prior to construction of the facility. A CPCN does not pre-empt any local zoning or other State or federal requirements. Pursuant to N.C. G.S. 62-82:

- Applicant for CPCN required “to publish a notice thereof once a week for four successive weeks in a newspaper of general circulation in the county where such facility is proposed to be constructed”
- Upon complaint, the Commission “shall ... enter upon a hearing to determine whether such certificate shall be awarded.”

Biomass: Complaints currently filed on 2 pending biomass plant CPCN applications.

Wind: The Commission has issued two CPCNs for wind farms and currently has one application pending: Docket No. EMP-49, Sub 0 (300-MW - Pasquotank and Perquimans Counties) and Docket No. EMP-61, Sub 0 (80-MW-Beaufort County.) Both issued prior to the passage of House Bill 484, S.L. 2013-51 (Permitting of wind Energy Facilities) which establishes a permitting process through DENR.

Solar: Complaints filed on at least 16 solar farm CPCN applications:

- 4 projects have withdrawn from the process.
- 4 public and evidentiary hearings have been held to date.
- Rutherford County recently placed a 90 day moratorium on solar farms.

Other:

Net Metering – October 25, 2005 Order (Pre-REPS)

- Required utilities to offer net metering to customer who owns and operates a solar PV electric generating facility. (Applies to other forms of renewable generation as well.)
- Established a maximum a capacity of up to 20 kW for residential generator and 100 kW for a non-residential generator.
- Required that the Utility must net meter on a first-come first-served basis up to 0.2% of the utilities North Carolina retail peak load for the previous year.
- Kilowatt-hour credit applied to following monthly billing period, but shall reset to zero at the beginning of each summer billing season.
- RECs associated with excess generation shall be granted to the utility.





Other:

Net Metering – March 31, 2009 Order (post-REPS)

- North Carolina General Statute 62-133.8(i)(6), passed as part of Senate Bill 3, directed the Commission to consider if it was in the public interest to adopt rules for net metering up to 1MW.
- Pursuant to this mandate the Commission issued a March 31, 2009 Order revising net metering policies, the Order did the following:
 - Required utilities to revise riders or tariffs to allow net metering for any customer that owns or operates a renewable energy facility that generates electricity with a capacity of up to 1 MW.
 - Stated that the customer shall connect pursuant to the approved interconnection standard, which requires the study and implementation of any improvements to the system required.
 - Stated that customers may elect to take retail electric service pursuant to any rate schedule available and may not be assessed any standby, capacity, metering or other fees other than those approved for all customers on the same rate schedule.
 - Directed that standby charges will be waived, for any net-metered residential customer with electric generating capacity up to 20kW and any net-metered non-residential customer up to 100kW.
 - Credit for excess electricity shall remain the same.
 - Eliminated the aggregate cap of 0.2% of the utilities NC retail peak load for the previous year.
 - If the customer chooses to take retail electric service pursuant to a TOU-demand rate schedule, it shall retain ownership of all RECs associated with its electric generation.

Other: Third Party Sales



North Carolina General Statute § 62-23(a) defines a "public utility" as a person owning or operating in North Carolina equipment or facilities for:

- (1) producing, generating, transmitting, delivering, or furnishing electricity, piped gas, steam, or any other like agency for the production of light, heat or power to or for the public for compensation.

Exemption: a person that constructs or operates an electric generating facility, the primary purpose of which is for the person's own use and not for the primary purpose of producing electricity, heat, or steam for sale to or for the public for compensation.

The standard for determining whether a given enterprise is a public utility was established by the North Carolina Supreme Court in State ex rel. Utilities Commission v. Simpson, 295 NC 519, 246 S.E.2d 753 (1978). The Supreme Court gave the Commission considerable flexibility in this regard, holding that what is the "public" in any given case depends upon the regulatory circumstances of the particular case including:

- (1) the nature of the industry sought to be regulated;
- (2) the type of market served by the industry;
- (3) the kind of competition that naturally inheres in that market; and
- (4) the effect of non-regulation or exemption from regulation of one or more persons engaged in the industry.

Questions/Contact

The header image features a dark blue background. On the left is the Great Seal of the State of North Carolina, which includes the text 'GREAT SEAL of the STATE of NORTH CAROLINA' and the date 'MAY 20. 1775'. To the right of the seal is a map of North Carolina, and overlaid on the map is a stylized image of a power transmission tower.

Questions?

Contact:

NORTH CAROLINA UTILITIES COMMISSION

Dobbs Building, 430 North Salisbury Street 27603-5918

4325 Mail Service Center 27699-4325

Phone: (919) 733-4249

Fax: (919) 733-7300

www.ncuc.net